

# GIB Inclination Sensors

## Single/Dual Axis Entry-Level Tilt Sensors (Z/XY)

### Overview

The entry-level tilt sensors offer a space-saving, high performance, and easy installation. Along with a high IP protection level, resistance to shock and vibration, and high electromagnetic compatibility, this product is suitable for mobile hydraulics applications, agricultural machines, construction machines and material handling equipment.

### Features

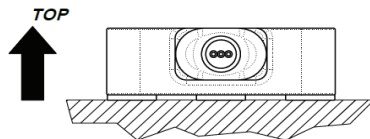
- Voltage or current analog output
- 8 models available
- 2m axial cable
- IP67/IP69K rated
- PKIT312-1QJ Magnetic Pen included with Dual Axis GIB models
- 3-year warranty



**GIB-XY-015-V-2A**



| GIB Inclination Sensors         |          |                |                 |                |          |                   |                     |
|---------------------------------|----------|----------------|-----------------|----------------|----------|-------------------|---------------------|
| Part Number                     | Price    | Number of Axis | Measuring Range | Accuracy       | Output   | Connection        | Drawing Link        |
| <a href="#">GIB-Z-360-V-2A</a>  | \$198.00 | 1              | +/- 180 degrees | +/-0.5 degrees | 0-10 VDC | pigtail: 6.5ft/2m | <a href="#">PDF</a> |
| <a href="#">GIB-Z-360-A-2A</a>  | \$195.00 | 1              | +/- 180 degrees | +/-0.5 degrees | 4-20 mA  | pigtail: 6.5ft/2m | <a href="#">PDF</a> |
| <a href="#">GIB-XY-015-V-2A</a> | \$198.00 | 2              | +/- 15 degrees  | +/-0.5 degrees | 0-10 VDC | pigtail: 6.5ft/2m | <a href="#">PDF</a> |
| <a href="#">GIB-XY-015-A-2A</a> | \$195.00 |                | +/- 15 degrees  | +/-0.5 degrees | 4-20 mA  | pigtail: 6.5ft/2m | <a href="#">PDF</a> |
| <a href="#">GIB-XY-045-V-2A</a> | \$198.00 | 2              | +/- 45 degrees  | +/-0.5 degrees | 0-10 VDC | pigtail: 6.5ft/2m | <a href="#">PDF</a> |
| <a href="#">GIB-XY-045-A-2A</a> | \$195.00 | 2              | +/- 45 degrees  | +/-0.5 degrees | 4-20 mA  | pigtail: 6.5ft/2m | <a href="#">PDF</a> |
| <a href="#">GIB-XY-085-V-2A</a> | \$198.00 | 2              | +/- 85 degrees  | +/-0.5 degrees | 0-10 VDC | pigtail: 6.5ft/2m | <a href="#">PDF</a> |
| <a href="#">GIB-XY-085-A-2A</a> | \$195.00 | 2              | +/- 85 degrees  | +/-0.5 degrees | 4-20 mA  | pigtail: 6.5ft/2m | <a href="#">PDF</a> |



**SINGLE AXIS**

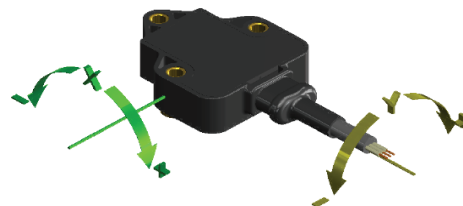
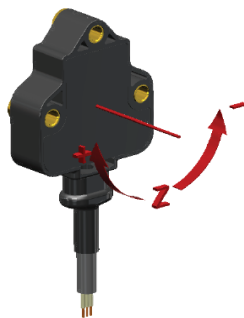
#### ANALOG CONNECTIONS DUAL AXIS X-Y

BLACK GROUND  
RED + SUPPLY  
YELLOW OUTPUT X  
GREEN OUTPUT Y  
BLUE n.c.  
WHITE n.c.

#### ANALOG CONNECTIONS SINGLE AXIS Z

BLACK GROUND  
RED + SUPPLY  
YELLOW OUTPUT Z  
GREEN n.c.  
BLUE n.c.  
WHITE n.c.

ITEMS MARKED "n.c." MUST NOT BE CONNECTED



## GIB-XY Inclination Sensor Accessory

| Accessory                   |         |                                                                      |
|-----------------------------|---------|----------------------------------------------------------------------|
| Part Number                 | Price   | Description                                                          |
| <a href="#">PKIT312-1QJ</a> | \$35.00 | Gefran magnetic pen, for use with Gefran GIB-XY inclination sensors. |



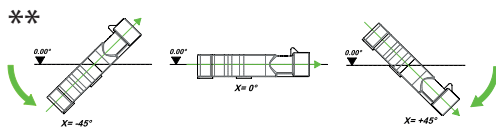
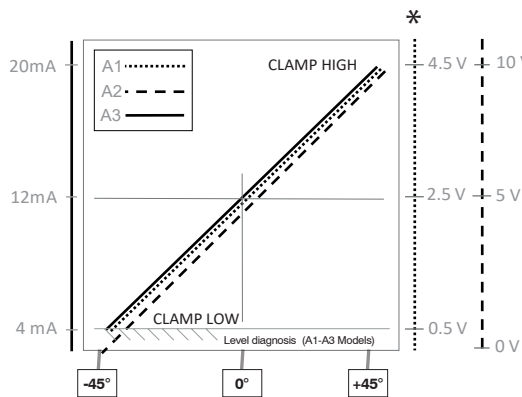
## Specifications

| GIB Inclination Sensor Specifications               |                                                                                                                                                              |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specification                                       |                                                                                                                                                              |
| <b>Measurement Range</b>                            | $\pm 15^\circ \pm 45^\circ \pm 85^\circ$<br>(single axis Z for analog output-dual axis XY)<br>$360^\circ (\pm 180^\circ)$ single axis Z only                 |
| <b>Supply Voltage</b>                               | +10 to +36 VDC                                                                                                                                               |
| <b>Output Signal</b>                                | 0-10 VDC; 4-20mA                                                                                                                                             |
| <b>Electrical Connections</b>                       | PUR cable 22 AWG                                                                                                                                             |
| <b>Resolution</b>                                   | 12 bit                                                                                                                                                       |
| <b>Accuracy (Factory Verification @ 25 °C)</b>      | < $\pm 0.5\%$ FS                                                                                                                                             |
| <b>Response Time</b>                                | ~650 ms                                                                                                                                                      |
| <b>Working Temperature</b>                          | -40 to +85°C [-40 to 185°F]                                                                                                                                  |
| <b>Temperature Coefficient at 0-deg inclination</b> | Typical < $\pm 0.006$ deg/°C                                                                                                                                 |
| <b>Long Term Repeatability</b>                      | Single Axis: Typical < $\pm 0.5$ deg in the range of $\pm 180$ deg<br>Dual Axis: Typical < $\pm 0.5$ deg in the range $\leq \pm 60$ deg, $\pm$ deg otherwise |
| <b>Vibrations</b>                                   | 20g 10Hz to 2000Hz IEC 60068-2-6                                                                                                                             |
| <b>Shock</b>                                        | Impulsive on 3 axis: 50g 11ms IEC 60068-2-27                                                                                                                 |
| <b>Electromagnetic Compatibility</b>                | 2014/30/EU Electromagnetic Compatibility (EMC)                                                                                                               |
| <b>IP Protection Level</b>                          | IP67-IP69X                                                                                                                                                   |
| <b>Housing Material</b>                             | PBT [Polybutylene Terephthalate]                                                                                                                             |
| <b>Autozero Function</b>                            | Dual Axis models only                                                                                                                                        |
| <b>Agency Approval</b>                              | CE                                                                                                                                                           |

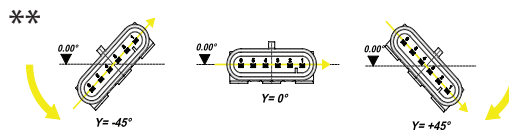
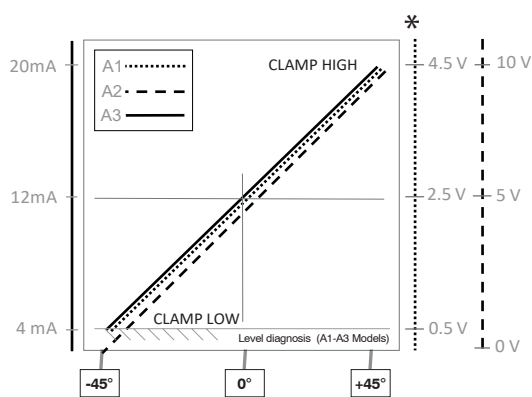
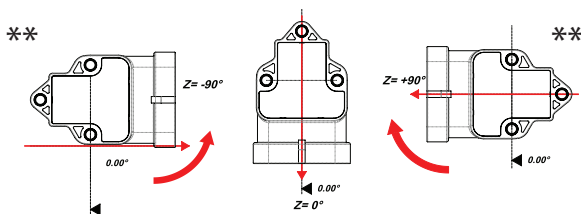
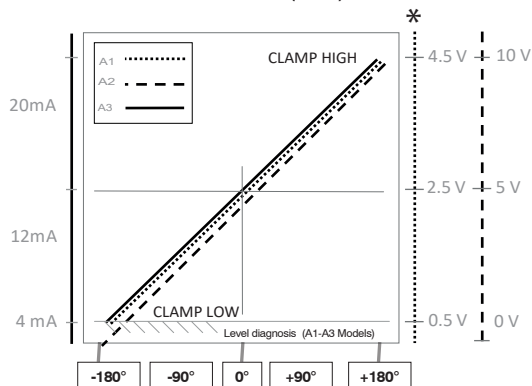
To obtain the latest agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

## FUNCTIONS: SENSOR OUTPUT GRAPH

DUAL AXIS TILT SENSOR (XY) - X AXIS



DUAL AXIS TILT SENSOR (XY) - Y AXIS

SINGLE AXIS TILT SENSOR ( $\pm 180^\circ$ ) - Z AXIS

### LOAD CONDITIONS

- \* +0.5 VDC to +4.5 VDC output with power, +10 to 36 VDC and +0 to 10 VDC output with power +11 to 36 VDC: load resistance > 100 kohm
- \* +0.5 VDC to +4.5 VDC output with power +5 VDC: load resistance > 100 kohm
- +4 to 20mA output with power < 15 VDC up to 10 VDC: the maximum load resistance is admissible 200 ohm
- +4 to 20mA output with power > 15 VDC up to 36 VDC: the maximum load resistance is admissible 500 ohm

\* 0-5V models are not offered by AutomationDirect at this time.

\*\* Rotation drawings shown with AMP Superseal 6P connections. AutomationDirect does not currently carry these models however, the cabled versions operate in the same fashion.